

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-2 (canceled):

Claim 3 (previously presented): A centralized method of providing admission control functionality in a communications system including a plurality of nodes, said plurality of nodes including a control node, at least a first node coupled to a second node by a first link, a third node coupled to the second node by a second link and a fourth node coupled to the third node by a third link, the control node coupled to at least one of said first, second, third, and further nodes, the method comprising:

- maintaining a set of link bandwidth utilization information, the set of link bandwidth utilization information including bandwidth utilization statistics for at least each of the first, second and third nodes;

- operating the control node to receive a service request corresponding to the first node and to determine from said maintained set of link bandwidth utilization information if there is sufficient bandwidth available on at least said second and third links to satisfy said service request; and

- operating the control node to generate the link bandwidth utilization information corresponding to said second link from an estimate of bandwidth that will be used on said second link by services over which said control node does not have admission control and a sum of

services which will use said second link which said control node authorized.

Claim 4 (original): The method of claim 3, wherein said link bandwidth utilization information corresponding to said second link is further generated as a function of a link utilization scaling factor.

Claim 5 (original): The method of claim 4, wherein best effort Internet traffic is carried over said second link and where said link bandwidth utilization information corresponding to said second link is further generated as a function of the physical link capacity of links used to couple Internet service users to said second link and an average of the physical link capacity which is used over a period of time by said users for Internet service.

Claim 6 (original): The method of claim 5, wherein said control node generates a control message to reduce the amount of bandwidth allocated to best effort traffic on one of said first, second and third links, when a service request for a service requiring a guaranteed amount of bandwidth on said one of said first, second and third links is received and said guaranteed amount of bandwidth is not available due to best effort traffic on said one of said first, second and third links.

Claim 7 (currently amended): A centralized method of providing admission control functionality in a communications system including a plurality of nodes, said plurality of nodes including a control node, at least a first node coupled to a second node by a first

link, a third node coupled to the second node by a second link and a fourth node coupled to the third node by a third link, the control node coupled to at least one of said first, second, third, and further nodes, the method comprising:

- maintaining a set of link bandwidth utilization information, the set of link bandwidth utilization information including bandwidth utilization statistics for at least each of the first, second and third nodes;

- operating the control node to receive a service request corresponding to the first node and to determine from said maintained set of link bandwidth utilization information if there is sufficient bandwidth available on at least said second and third links to satisfy said service request;

- when it is determined from said maintained set of link bandwidth utilization information that there is insufficient bandwidth available to satisfy said service request, determining if a user to whom said service request corresponds is using other services which ~~can~~ could be terminated to provide the bandwidth required to satisfy said service request; and

- when it is determined that said user to whom said service request corresponds is using other services which ~~can~~ could be terminated to provide the bandwidth required to satisfy said service request, notifying the user of the insufficient bandwidth and presenting the user with the option of terminating the services being provided to said user which ~~can~~ could be used to provide the bandwidth required to satisfy the service request.

Claims 8-9 (canceled):

Claim 10 (currently amended): A centralized method of providing admission control functionality in a communications system including a plurality of nodes, said plurality of nodes including a control node, at least a first node coupled to a second node by a first link, a third node coupled to the second node by a second link and a fourth node coupled to the third node by a third link, the control node coupled to at least one of said first, second, third, and further nodes, the method comprising:

maintaining a set of link bandwidth utilization information, the set of link bandwidth utilization information including bandwidth utilization statistics for at least each of the first, second and third nodes;

operating the control node to receive a service request corresponding to the first node and to determine from said maintained set of link bandwidth utilization information if there is sufficient bandwidth available on at least said second and third links to satisfy said service request;

when it is determined from said maintained set of link bandwidth utilization information that there is insufficient bandwidth available to satisfy said service request, determining if a user to whom said service request corresponds is using other services which ~~can~~ could be terminated to provide the bandwidth required to satisfy said service request;

when it is determined that said user to whom said service request corresponds is using other services which ~~can~~ could be terminated to provide the bandwidth required to satisfy said service request, presenting the user with

the option of terminating the services being provided to said user which ~~can~~ could be used to provide the bandwidth required to satisfy the service request;

operating the control node to receive a reply from said user indicating a desire to terminate services or not to terminate services;

denying said service request when said reply indicates a desire not to terminate services; and

granting said service request when said reply indicates a desire to terminate services.

Claim 11 (original): The method of claim 10, where said step of granting said service request includes:

operating the control node to terminate at least some services provided to said user and to reallocate at least some of the bandwidth used by said services to providing the requested service.

Claim 12 (previously presented): The method of claim 10, wherein presenting the user with the option of terminating the services includes:

providing information to said user through a web interface indicating which services are available for termination.

Claim 13-14 (canceled):

Claim 15 (previously presented): A communications system comprising:

a first node;

a second node coupled to the first node by a first link;

a third node coupled to the second node by a second link;

a fourth node coupled to the third node by a third link; and

a control node coupled to at least one of said first, second, third, and further nodes, said control node including and maintaining a set of link bandwidth utilization information, the set of link bandwidth utilization information including bandwidth utilization statistics for at least each of the first, second and third nodes; said control node further including:

means for receiving a service request corresponding to the first node and to determine from said maintained set of link bandwidth utilization information if there is sufficient bandwidth available on at least said second and third links to satisfy said service request, and wherein said control node further comprises:

means for generating link bandwidth utilization information corresponding to said second link from an estimate of bandwidth that will be used on said second link by services over which said control node does not have admission control and a sum of services which will use said second link which said control node authorized.

Claim 16 (original): The system of claim 15, wherein said link bandwidth utilization information corresponding to said second link is further generated as a function of a link utilization scaling factor.

Claim 17 (original): The system of claim 16, wherein best effort Internet traffic is carried over said second link and where said link bandwidth utilization

information corresponding to said second link is further generated as a function of the physical link capacity of links used to couple Internet service users to said second link and an average of the physical link capacity which is used over a period of time by said users for Internet service.